MULTIMEDIA UNIVERSITY®

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2022/2023 (Term 2220)

PCA0150 – COMPUTER APPLICATIONS

(Foundation in Information Technology & Foundation in Business)

3 JULY 2023
2.30 p.m – 4.30 p.m
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of **FOUR** pages (excluding the cover page).
2. Answer **ALL** questions.
3. Write your answers in the Answer Booklet provided.

Instructions: Answer **ALL** questions. Write your answers in the Answer Booklet.

QUESTION 1 [10 Marks]

a. Briefly explain the component (highlighted: 3.40 GHz) in Figure 1. Describe the importance of the component.

Processor	Intel(R) Core(TM) i7-6700 CPU @ 3.40GHz 3.40 GHz
Installed RAM	16,0 GB (15,8 GB usable)

Figure 1: Computer Specification

(2 marks)

b. Memory is electronic components that store instructions waiting to be executed by the processor, data needed by those instructions, and the results of processing the data. List **TWO (2)** categories of items which can be stored by memory in a computer.

(2 marks)

c. Application software is available in various forms of distribution. Briefly explain each of the distribution forms below:
   i. Retail Software
   ii. Open-Source Software
   iii. Shareware

(3 marks)

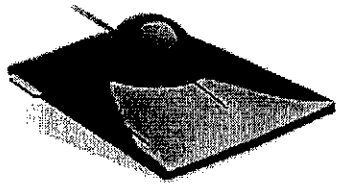
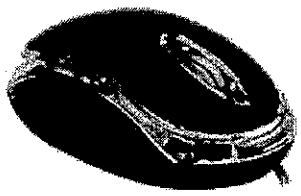
d. System software consists of programs that control or maintain the operations of the computer and its devices. Answer the following questions that are related to system software.
   i. Give **TWO (2)** examples of system software.
   ii. What is booting process?
   iii. Explain the meaning of multi-tasking in an operating system.

(3 marks)

QUESTION 2 [10 Marks]

a. Name the computer devices shown in Table 1 below.

Table 1: Computer devices

a 	d 

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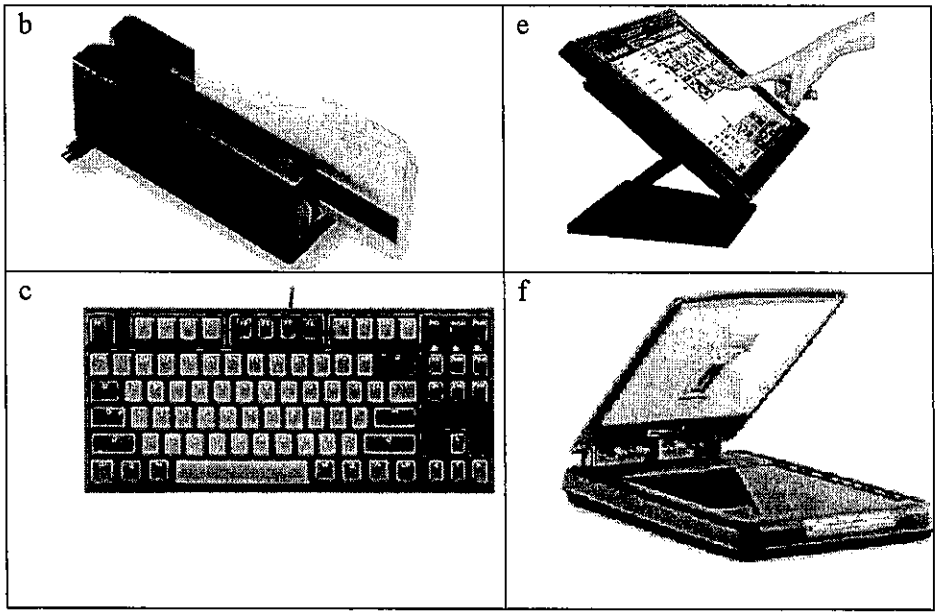

(3 marks)

b. What is non-impact printer? Suggest **TWO (2)** examples of the printer.

(2 marks)

c. Identify and explain briefly **TWO (2)** methods used by hard disk to store data.

(3 marks)

d. List and explain **TWO (2)** reasons, why cloud computing is the most preferred solution nowadays.

(2 marks)

QUESTION 3 [10 Marks]

There are many services created and accessed by users through the Internet. Payment kiosk is the most common service used by users. ABC Company wants to install three of its payment kiosks in Melaka.

a. Identify and briefly explain the best category of operating system for the payment kiosk.

(1.5 marks)

b. What is the function of having a user interface? Suggest the suitable type of user interface for the kiosks above.

(1.5 marks)

c. Suggest the **BEST** network architecture that should be used for these payment kiosks. Draw the network architecture to support your suggestion.

(4 marks)

Continued...

d. Explain **TWO (2)** benefits and **ONE (1)** risk of using the suggested architecture to the company.

(3 marks)

QUESTION 4 [10 Marks]

a. Explain briefly how database management systems (DBMS) manage deleted or obsolete records.

(3 marks)

b. What is data validation in database and what are the **TWO (2)** examples of validity check?

(2 marks)

c. List the **FOUR (4)** tests used by the system analysts to evaluate the feasibility of a project during system development.

(2 marks)

d. One activity during the implementation phase in system development is to develop programs and apps. Differentiate between programming language and application development tools to be used in this phase.

(3 marks)

QUESTION 5 [10 marks]

a. Briefly discuss the difference between multimedia and interactive multimedia.

(2 marks)

b. State **THREE (3)** differences between graphics produced by painting software and drawing software.

(3 marks)

c. Answer the following questions referring to the two hypothetical scenarios involving two MMU students described below.

Scenario 1:
Nayan is a security enthusiast and found a way to log into MMLS as a lecturer by exploiting a bug in the system's programming.

He deleted all other announcements and posted the announcement, "No class for this week!" on the Computer Applications class page using his lecturer's account. He did not report the bug to the university. He was caught and suspended for 1 trimester.

Continued...

Scenario 2:
Kodie does not like how the MMU Bulletin Board looks. He wrote a new program that bypasses the system security to retrieve all the messages on the bulletin board and displays them on a better-looking website with features such as alerts on Facebook and Twitter. He informed the security flaws to the IT department.

i. Based on his action in computer intrusion, Nayan is a(n) _____.
(0.5 mark)

ii. Based on his action in computer intrusion, Kodie is a(n) _____.
(0.5 mark)

iii. Discuss **TWO (2)** major differences between Nayan's and Kodie's actions?
(2 marks)

iv. Nayan has graduated and is hired by MMU to help find problems with MMU's systems and secure them. In security terminology, he is now known as a(n) _____ _____.
(0.5 mark)

d. One of the most common causes of system failure in a computer is an electrical power variation. It can cause loss of data and equipment to Shaun's online database system. Explain briefly **ONE (1)** type of electrical power variation.
(1.5 marks)

End of Paper